

CH.3.5 PARALLEL AND PERPENDICULAR LINES

$$y_2 = \underbrace{m_1}_{\text{SLOPE}}x + \underbrace{b_1}_{\text{INTERCEPT}} \quad y_2 = \underbrace{m_2}_{\text{SLOPE}}x + \underbrace{b_2}_{\text{INTERCEPT}}$$

LINES ARE PARALLEL

WHEN SLOPES ARE EQUAL $m_1 = m_2$

$b_1 = b_2$ THEY OVERLAP

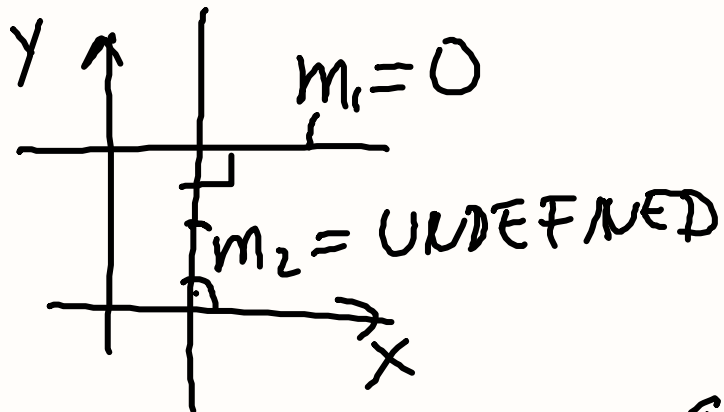
$b_1 \neq b_2$ THEY ARE SEPARATE

LINES ARE PERPENDICULAR
WHEN THEY ARE OPPOSITE
RECIPROCAL OF EACH OTHER

$$m_1 = 2 \quad m_2 = -\frac{1}{2}$$

$$m_1 = -\frac{1}{2} \quad m_2 = 2$$

$$m_1 = \frac{1}{7} \quad m_2 = -7$$

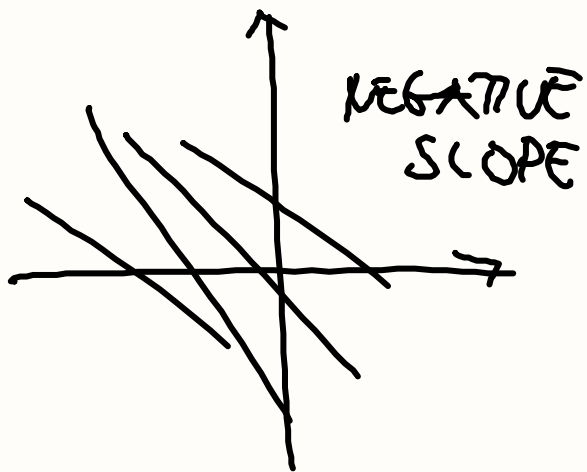
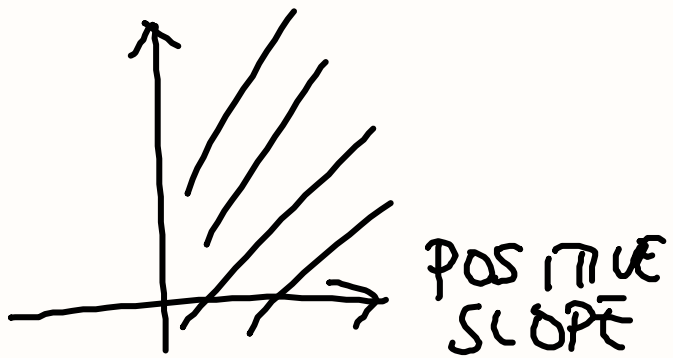


$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{\text{RISE}}{\text{RUN}}$$

(x_1, y_1) (x_2, y_2)

COORDINATES
OF TWO POINTS



PRACTICE p.167 #1-4,7

HOME p.167 #8-10